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Annual Address

BEFORE THE

AMERICAN ACADEMY OF MEDICINE,

AT

New York, September 16th, 1879,

BY

LEWIS H. STEINER, A.M., M.D.,

OF FREDERICK, MD.,

President of the Academy, Permanent Member American Medical Association, Fellow American Association for Advance-

ment of Science, &c., &c.

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LEWIS H. STEINER, A.M., M.D., of Frederick, Md.,

President of the Academy, Permanent Member American Medical Association, Fellow Am. Ass Advancement of Science, &c. &c.

GENTLEMEN: Fellows of the American Academy of Medicine! The -close of the third year of the existence of our organization shows an increase of interest, on the part of the medical profession, in the objects aimed at in its formation, and a more earnest desire to see how they may be secured. The Academy does not claim any merit for the discovery of defects in the preparatory training of those who enter upon a course of medical study; these defects have been long recognized by the profession all over the land. It does not propose any novel method of association to bind in close fraternal bonds the members themselves of the profession; this is attempted by the organizations already in existence which have done so much to dignify the profession of medicine and to eliminate from its ranks the shallow empiric. It does not arrogate to itself any special ability to add to the store of medical knowledge in regard to disease or to the cultivation of State medicine; these are the darling objects of every cultured, faithful physician, towards which he feels himself drawn by the strongest possible ties of professional loyalty and the most urgent claims of philanthropy. It antagonizes no organized effort to improve the profession or to increase the sphere of its usefulness, and it proposes no contest for numbers with any existing society. On the contrary, its members are mostly connected with other medical organizations, and anxious for their success and prosperity.

Its main object is the union of medical men who recognize the old college curriculum as furnishing the most efficient preparatory course for those who intend to enter upon the study of medicine. Such an union, it is believed, will enable its Fellows to exert an efficient influence towards the elevation of the preliminary requirements of our medical schools, and to encourage ambitious youth to lay the foundations—deep, firm and broad, upon which they propose to rest their medical studies, while it will not prevent them from contributing, in common with the members of other organizations, towards the accumulation of theoretical knowledge and its suitable practical application to the wants of mankind. This main object is that which is peculiar to the American Academy of Medicine. For this its Fellows are chiefly banded together, and to its attainment their

efforts are mainly directed.

The Academy strives to utter, in a definite, distinct form, that which has been struggling to secure articulate expression in many ways, and to secure by union of effort that for which every lover of his profession is ardently longing. Its numbers have slowly increased since its organization. In the nature of the case its membership must be somewhat limited—restricted as it is by the

requirements constituting eligibility to admission. Still there is good reason for congratulation as to its present condition and future prospects. Its past makes us hopeful as to its future, and having not rashly assumed a task deemed important, we feel emboldened

to continue our efforts to secure its accomplishment.

I deem it neither unwise nor malapropos to select as the subject for the address, required of the President by our Constitution at the annual meeting, The Preliminary Education needed by the Medical Student, although in its treatment I may be obliged to go over ground already so ably trod by my two distinguished predecessors, because we cannot lay down too distinctly what we consider to be the main object which the Academy is striving to attain. In doing this I shall take for granted, what has been reiterated over and over again by the medical associations and journals of the country as to the defective nature of the training of many, who have rashly entered into the ranks of a learned profession and are now recognized by virtue of their medical diplomas as the peers of those who have earnestly pursued what is believed to be the best possible preparation for professional study. The public utterance from these sources on this subject have been so numerous, that their repetition would be wearisome to both speaker and hearer.

The necessity for the existence of the three great professions of Theology, Law and Medicine arose from the disturbance of the relations that primarily existed between man, the Deity, his fellow-man and his own physical nature. Had the Fall not occurred, there would have been no necessity for the existence of either of these. Without the penalty inflicted for the violation of the sole prohibition laid upon man, these relations would have remained unimpaired; he would have been a dutiful, law-abiding creature, delighting in the paths of right and shurning those of wrong, a loving brother, unaffected by the deteriorating influences of low and selfish considerations, and a being living strictly within the laws and requirements of his own physical nature. But the beautiful harmony was destroyed by his

First disobedience and the fruit, Of that forbidden tree, whose mortal taste Brought death into the world, and all our woe, With loss of Eden.

Thenceforward a struggle was necessary to re-establish the relations thus broken with the Deity, his brother, and himself. The violation, indeed, of the first, made fratricide possible to Cain, disease a terrible fact, and death an awful certainty. The re-establishment of these relations became a life-work, needing continual assistance or advice. At first the priest seems to have combined the duties now divided among the members of the three professions. In time, as knowledge extended, these duties became more and more distinct, until at length the minister, the lawyer and the physician were recognized as having definite and distinct functions to perform, and as being set apart to aid respectively in the due rectification of man's spiritual, fraternal and physical aberrations. Their functions

were esteemed of preeminent importance, and on that account their professions were looked upon as demanding all possible culture and as being essentially *learned*. Indeed, learning was for a long course of years absolutely confined to these three classes of men, on whose rolls the names of some of the noblest as well as the wisest may be found inscribed.

The preparation necessary to the special study of either of these great professions was considered as essentially the same. Each requires careful intellectual training and discipline of him who would enter its domain and master its contents; each needs a certain range of knowledge to fit the student to con its alphabet so that he may read its pages so replete with wondrous lore; each demands earnest devotion and zealous study of those who expect to attain distinction among its cultivators. Occupying the high distinction of learned professions, no one should aspire to a place among their members unless he has employed all due diligence to justify his right and title thereto. Whatever will secure him mental discipline combined with the special knowledge, which the experience of many men extending through many years has determined as best adapted to fit him for the professional studies he is to encounter; that he dare not neglect if he would achieve success legitimately. say mental discipline and the special knowledge determined to be best suited for his future studies. There are those who claim that the whole object of academic culture is the former alone and that any course of study—of whatever branches composed—which will secure such discipline, is equally effective and of equal value. Claiming for this opinion the force and power of a self-evident axiom they proceed to adjust equivalent courses of study, supposed to be adapted for the production of like results, and submit these to the election of the individual student. But, although they claim that some of these are at the same time specially fitted for those who propose to devote their lives to commercial, agricultural, mathematical, or pursuits involving the practical application of the sciences, they, at the same time, seem to ignore the fact that there must also be branches of study that best fit the student for ready and easy entrance upon the fields of knowledge, which he must traverse in order to attain position and distinction in either of the professions already named. Electing a special curriculum, adapted to the practical occupations to which I have referred, is recognized as exceedingly judicious, but the adoption of an academic course, that will best prepare for the study of either theology, law, or medicine, is considered of slight or no importance. Here mental discipline is deemed of paramount importance, and special preparation considered of little value. Much of this order of thought is due to the so-called practical tendency of the age, which ignores the fact that he is best fitted for practical work who is most thoroughly grounded in the principles and laws which must underlie it—that he is best prepared for special duties who has provided himself with all necessary acquaintance with the adjuvants that will enable him to comprehend these duties and everything pertaining to them. We need both mental discipline and special knowledge in the years of preparation, and this fact I desire to emphasize prior to the consideration of the nature of the course of study, which is contended for, by most of those who constitute the membership of the Academy, as needed by the student prior to his entrance upon the study of the profession of medicine.

I. We may say that the preparatory curriculum should comprise, in a general way, whatever is necessary to secure a scholarly command of the English language. This must include a familiar acquaintance with its orthography and grammar; surely a requirement so evident that I hesitate to mention it, and yet the fact of its absence is too often painfully obvious. The good, old, tried and approved, persevering method of studying these rudimentary branches has been too much discarded of late years, and the result is that not all professional men show themselves faultless in their spelling and grammar. We find a proclivity to superficiality, even as low down as these foundations, which too often shows itself afterwards in every course of the superstructure that is placed upon them. And yet defects here, whenever they manifest themselves, must mar the general effects of that superstructure, in spite of every effort to make it strong or ornate. Further; the command of an easy, simple style of composition, such as is within the reach of every one who studies the masters of our language, and strives to appropriate as much of their peculiarities as may not antagonize or interfere with his own individuality of style, is another acquirement not to be despised by one, who will be called upon frequently to give opinions, either verbal or written, where clearness and simplicity are always to be preferred to oracular mystery and uncertainty of meaning. greatest compliment ever paid Macaulay was the remark made by Spottiswoode's proof-reader, "who declared that in the whole of the history, he had come upon only one sentence which was not apparent to him at first sight." Such an ability to think clearly, and to make one's thoughts intelligible to persons of moderate capacity, is an accomplishment that can be most readily secured by the careful and loving study of the classic authors of our language, and is within the reach of every one. It must, however, be striven after in early life, if one is to employ it naturally and with out the evidence of constant, wearisome labor, and hence I dwell upon it here as an important feature in the preparatory education of the medical student. His future studies will also be much advantaged by a command of the "well of English undefiled," to be acquired only by familiarity with those masters, who have contributed so largely to its incalculable wealth.

But to these studies must be added those that will reveal to him the mechanism of solid, substantial reasoning, together with the methods of forcible and beautiful expression. He must be taught to penetrate the hidden mysteries that constitute the priceless stores of *logic*, and the rich mines of beauty that make up the wealth of

rhetoric. The laws of thought, of the science that "deduces ideas or conceptions one from another, and constructs them into propositions, arguments and systems,"—the rules that govern simplicity and clearness of expression, along with those that imperatively regulate correctness of grammatical construction, these three formed the Trivium which the great scholars of the middle ages, as well as those of the ancient classic nations of Greece and Rome, considered indispensible to all genuine, reliable learning. No modern progress has freed us from the necessity of following the same routine, if we would attain like results. Can either be dispensed with in a profession, where the results of accurate observation must needs be connected with their causes by no slight, imaginary thread, but by the most enduring chain, and where the post hoc never unerringly implies the *propter hoc*? Are they not all-important where the results of logical thought must needs be clothed in intelligible words and simple diction? Where, indeed, has their absence been so clearly shown as in the history and practice of medicine with its wrecks of illogical theories stranded upon the shores of truth,—its long lists of dogmas and systems built upon superficial induction, in which homeopathy, hydropathy and Thompsonianism loom prominently forth, and where countless productions of the animal, mineral and vegetable kingdoms are shown to have been unduly exalted to the rank of specifics and then remorselessly almost thrown out of view-a long list extending from mercury itself down to cundurango or whatever may have been the last idol set up, by a false logic, as worthy of devout attention on the part of the empirical practitioner and his confiding patient. Have we not had warnings enough, that these studies should not be neglected by him, who craves the honors and assumes the responsibilities of the doctorate of medicine?

2. The study of the languages of Greece and Rome is also needed not only for the mental discipline they provide, but for the special knowledge they furnish the future student of medicine, and we add them to the list of those requiring his attention. I am aware that there is a school of educators in these days, which claims that the modern languages may be judiciously substituted for those of the classic nations, both on the score of discipline and practical utility, and that this school has many disciples not only among those who have been denied the advantages of classic culture, but includes some also who undervalue the advantages they have themselves enjoyed from their study. Recent utterances from some of our best thinkers show, however, that the conclusions of this school are being reconsidered and in not a few cases reversed. It is being once more claimed that "the classics are the basis of all progress in education," and that history shows how "from the moment Europe went back to the study of the classics a reformation commenced and scholarship revived." Surely there must have been reasons entitled to the profoundest respect even in our days, which justified the time and attention paid by our ancestors to classical study. It could not have been that the field of knowledge was restricted to philology, because we have abundant proof that there were giant minds then that contended with profound problems in other departments and secured truths, which became afterwards the stepping stones to still higher and more important discoveries. And yet, there was scarcely a scholar to be found in any department who had not first undergone a thorough training in the classics—an apprenticeship, so to speak, to fit him for stern study and earnest grappling with intellectual problems—a course of intellectual gymnastics, as it were, to qualify the athlete for any encounter he might afterwards have in his special, professional studies. This order of training, having been tried, tested and approved, was demanded of the priest, the lawyer, the physician, and the cultured man of every grade and position in society. It was so efficient that similar results have rarely ever been attained by

any other course of preparatory study.

I crave pardon for repeating here, what I have previously said on the subject of the effects of classical study on the mind, so far as its disciplinary influence is concerned. "The peculiar difficulties the classics present to the student are prolific in very important practical results. They require that his memory be trained to the retention of words and their significance, and his judgment and æsthetic taste to the discrimination of delicate shades of thought, the mastery of profound conceptions as well as artistic delineations, the appropriation of ideas not easy to grasp but when secured worth more than the labor expended. They furnish great assistance in the formation of a judgment capable of weighing delicate shades of meaning involved in forms of expression of rare beauty and wonderful power. Their student is taught to judge of men by an exact rule, which finished expression enshrining sturdy thought so certainly always supplies. He acquires analytic power, in following the precise steps of reasoning employed by philosophers who were experts in their specialties, terseness of expression such as can only be found among people of high and thorough culture, accuracy of delineation peculiar to historians who were masters of the idea of history, and cultivated diction by constant association with the musical current through which poetic thoughts of the highest fervor flowed."

But there is also a direct benefit obtained by the student from the real utility of these languages themselves. Not only are many words in the English language derived from them, but the nomenclature of the medical profession is constructed chiefly from materials which they furnish. The text books of the sciences preparatory to the study of the practice bristle all over with words compounded from these flexible languages, so as to bear some direct reference to the ideas or things which they represent. To use them intelligently and not as mere sounds without sense arbitrarily applied, one must be acquainted with the sources from which they are derived. Indeed the technicalities of all the physical and biological sciences is at best a jargon, unless one is supplied with the key which these languages furnish, while with it all is replete with significance and

an appositeness that commends it to the student. But the very circumstance, that most scientific terms are formed from languages universally recognized as specially suited to such a purpose, insures the naturalization of these terms in all the modern languages with only occasional slight changes in their terminations. Such catholic employment of the same words makes the study of scientific text-books somewhat simpler to the student and greatly aids him when, with the view of increasing his stores of professional knowledge,

he attempts to read foreign authors

On the whole, it must seem almost incredible to any one, who has availed himself of the advantages furnished by a faithful study of Latin and Greek before entering upon his medical studies, that a student could deliberately forego these,—that he would undertake the task of fighting his way without the assistance they are able to render at almost every step of his progress. In all my experience I never heard a physician, who had faithfully gone through a classical course under competent teachers, regret the time spent in forming an acquaintance with these ancient languages, while it has been my lot to meet many who deeply lamented their error in neglecting them in their youth and labored zealously to repair the same

afterwards, by private study, at an advanced age.

The attempt has been made to shelve classical studies by the sneer of cui bono, as though there was nothing valuable in the world, or indeed in life, unless it could be expressed in dollars and cents. A cool, calculating, heartless utilitarianism has striven to show that there is no adequate dividend for the capital of time and labor expended. A would-be practical spirit has elevated its nose in contempt at what it ignorantly asserts has no sympathy with, or part in the present busy age. And yet, if what I have said, in defence of classical studies, be supported by fact, then are these most practical and useful for the present as they have been in the past and as they will be for all future time. Neglect and contempt will simply bring their own punishment, while respect and earnest study will ensure a result that is far above all possible valuation in mere dollars and cents.

3. Mathematical studies must also form an essential part of this preparatory course. Ideas of space and time to become intelligible require their assistance. They develop analytic power and the faculty of concentration of thought, which are indispensible to the true student. They tend to the cultivation of the habit of giving fixed and individual attention to any subject under consideration, and of securing concentration of the mental faculties to its real nature. Hence their value is paramount to all others in the curricula of technical schools, and in institutions, like West Point or Annapolis, where military or naval officers are to be trained to per-form duties demanding the highest analytical power under circumstances of the most distracting nature. Without their assistance these officers would not be prepared to understand the complicated and confusing situations in which they are often placed, and to devise, as it were,

on the instant, the means of commanding them or of avoiding threatening peril. In the technical schools, where construction is specially taught, they are necessarily indispensible as the foundation of the instruction there given, while in those where physics and chemistry constitute the chief subjects of study, they must go hand in hand with these if results are to be attained that can claim the merit

of accuracy and reliability.

Although probably less popular than any other class of studies, they singularly combine the benefits of discipline and practical knowledge, notwithstanding the fact that they have to do with abstract truth and are confined essentially to the domain of pure reasoning. But they demonstrate at the same time the grand axiom that "truth is always practical, no matter how abstract may be the domain in which she dwells," since the place held by mathematics in the sphere of human practical effort is that of a crowned head upon an imperial throne. Hence the ancient philosopher, Plato, was wont to commend its study as of incalculable value, and we find that, in all ages and with every nation that has shown any progress at all, it has had its enthusiastic votaries, who have found inexpressible delight in investigating the nature of its truths and their numerous

applications.

Now, the peculiar results upon mental training, which mathematical studies furnish, are no less necessary to the physician than to the soldier or the sailor. He is also called upon to practice his profession in circumstances and amid surroundings that demand the possession of the faculty of divesting himself of the influences of passion and feeling, of eliminating the perturbating agencies which constitute the environment of his patient, of piercing to the very core the causes of morbid symptoms, and of readily employing the agencies that will assist nature to eliminate all abnormal influences from the human body. He must be able to command himself and all his energies under the most adverse circumstances for cool and deliberate thought, to use the most acute analysis to avoid mistaking an effect for a cause, to put aside in the discussion of a case what ever is accidental while he gives due weight to what is incidental and pathognomonic, and finally so to employ the materia medica, which scientific discovery has furnished him, that abnormal actions shall be suppressed and those which are normal restored. And no study will go so far towards the cultivation of the faculty of doing this as mathematics. But its importance does not cease here, since its rules and teachings find direct application in every branch of medical science no less than in the practical and mechanical sciences of the day. Physiology, anatomy, chemistry, and the different specialties that now claim attention from the medical man -all have recourse to mathematics for assistance in securing exact results. The doctor who is ignorant of its teachings, will find it difficult to attain any marked distinction in our profession at the present time. The great masters willingly acknowledge their indebtedness, and he who would follow in their footsteps must be ready, like them, to ask and receive aid from the mathematical sciences.

4. There is another class of studies which also holds a fixed and necessary place in the normal preparatory course of the medical student, and whose right to such distinction is not contested by the modern, utilitarian spirit. I refer to those studies which are specially called scientific, including physics, chemistry and biology. These exercise a powerful influence in the way of mental discipline, while they furnish at the same time an immense amount of information absolutely essential to the medical student as a portion of the foundation of his medical knowledge, and also necessary to the successful practical application and use of the same in his future professional life. The first of these three, physics, Bain divides into molar, or that which has reference to motion in mass, and molecular, to motion in molecule. He shows that its methods are partly deductive and partly inductive. "As a deductive science, molar physics is a branch of applied mathematics, checked and controlled by the perpetual reference to facts. As an inductive science, physics makes an unsurpassed display of the machinery and resources of observation and experiment. It also shows to advantage all the methods of experimental elimination. The facts being subject to the great law of conservation, the deeper experimental problems consist in ascertaining the collections or arrangements for transmitting or evolving the different modes of force." He further shows that in the second, chemistry, we have as the special fact chemical attraction, which, however, involves these subsidiary facts —the definiteness of the properties of the elements, the evolution of heat in their union, with the disappearance of their chief peculiarities. It is naturally divided into two parts, inorganic and organic, the one leading to the consideration of mineralogy and geology, and the other to that of biology itself. In the latter we have to do with the definition of life in plants and animals with its varied manifestations in their respective kingdoms, and here we encounter, independent of the deductions derived from physics and chemistry, a series of laws which are more or less empirical, which in some cases are temporarily recognized as fixed laws of nature, on account of the extended nature of the agreement on which they are based.

The value of the training, that the study of such facts and the laws controlling them will secure, cannot be gainsaid for a moment in our present discussion. There must be great faculty of observation, ability to grasp facts in their true relations and readiness to generize the same in him who would achieve success in medicine. He must learn to see things as they are, and not as any preconceived hypothesis would have them to be. He must learn to distinguish between what is accidental and what essential, and must be ready, even in the presence of what are called laws, to thrust them aside should new generalizations show that they do not satisfy the definition of what is real, true and immutable. All this is taught him in the

study of these sciences, probably more definitely than in any other

range of studies.

But their importance is also not confined to the mental discipline acquired by their study, since they contribute directly to the elucidation of every branch of medical study. Physiology, anatomy, materia medica, obstetrics, practice and surgery,—these and the specialties are so dependent upon physical, chemical and biological sciences, that they could not have attained their present proportions, had it not been for the assistance constantly rendered them by these The student, who is devoid of their aid, must accept blindly every statement of his text-books and every dictum of his teachers without the ability to examine and test their truth. He is converted into a quasi-machine to perform a certain fixed task in one definite way, without the possibility of ever adapting it to any change of conditions whatever. On the other hand, he who avails himself of their assistance in his professional labors, is ready to profit by every recent discovery made by their cultivators and to place himself in the ranks of the progressive men of his age. But while it is universally admitted that they should constitute a portion of the academic preparation required of the medical student, still there is rarely any examination made by the faculty of our medical schools of their matriculants to ascertain whether they have been studied or neglected. The mill is expected to produce excellent flour of the highest grade, but no care is taken to select grain that will furnish such a product as a result of the machinery and process employed.

In addition to these four classes of studies, may be mentioned geography, universal history, political science and the elements of others that the age requires as an essential portion of the culture of every educated man, together with some knowledge of one or more of the modern languages. To recapitulate,—we have laid down as ordinarily needed by him who would enter upon the study of medicine, an acquaintance with the vernacular and everything that will enable him to employ it readily and with power, with the Latin and Greek languages, with mathematics, and with experimental and biological sciences,—supplementing these with the studies which modern culture declares necessary for every educated man. I have not ventured to state in what order they should be pursued, nor how far each should be carried. The order may be changed and the extent depend upon circumstances connected with the plans adopted by the administration of the academic institutions where they are taught, although we may claim that the more thorough the command it furnishes of these subjects the better will be the preparatory training and the greater the amount of knowledge attained, which will be serviceable in the professional studies that are to follow thereafter.

These branches of study constitute what has been known as the *old* College-curriculum of this country, in contradistinction to the different curricula proposed now in many of our institutions as preliminary to technical studies, or as suited for those students who elect to discard the classics on the ground that they are

useless and unsuited to the needs of a practical age. This old curriculum has been pursued with great exactness, and instruction given in its specific branches with enthusiasm and ability, in some of our academic institutions, small as well as great; in others su-perficiality has marked the daily teachings of improperly-fitted professors and been stamped indelibly in the defective attainments of their graduates; and in others still, the training of the college has been rashly thrust aside to make way for the magnificent pretensions of the university, to the great detriment of their students who enter totally unprepared for university methods and university studies. The course of studies here enumerated has no special efficacy, unless each is faithfully and zealously studied,—honestly, wisely and intelligently taught. Nor has "the old College curriculum" any talismanic power to transmute an ignoramus into an intelligent, zealous student, prepared to appropriate suitably all the professional pabulum that may be furnished in the medical college. Superficiality has too often reigned with undisputed authority in our academic halls, and aided in bringing diplomated honors to such low repute, that at times those who have richly earned their literary degrees have indignantly refused to wear them. superficiality with its inevitable proclivity to empiricism is not only peculiar to academic institutions, whether at home or abroad. The professional schools, forming a part of the university proper furnish evidences occasionally of like results. There are clergymen, lawyers and doctors, as well as academic graduates, who disgrace the titles and degrees with which they have been honored. There are men with military and naval titles, of all degrees from the lowest to the highest, who are ignorant of their profession, and more than suspected also of being devoid of personal bravery. Must Sherman discard his rank and title because Mulberry Sellers sports the military prefix to his name, or Porter scout the title of Admiral because a Sir Joseph Porter is the object of public amusement as the first Lord of the Admiralty? Shall the Doctor of Medicine, who has richly earned his diploma, disown his degree because the contemptible quack has also a parchment certificate of fitness, even if purchased from a venal college? Shall the Lawyer take down his sign and disclaim the designation of Attorney and Solicitor, because his profession is disgraced by pettifoggers? Shall the earnest and able minister renounce his calling, because the hypocritical pharisee, invested with ecclesiastical robes, too often for the honor of religion, appears, with broad phylacteries and pretentious prayers, in public assemblies of the people? And if not these, why should the collegiate graduate, who knows that he has earned his academic degrees at a reputable institution, discard or undervalue them because of the ignorant pretenders, who disgrace the diplomas they have secured from unprincipled collegiate institutions?

The old college curriculum has a significance to him who has diligently pursued its requirements. In advocating it now as the best possible preparatory course for the professional student,

we have the right to demand that it shall be all that it claims to be, and that the training and knowledge it can furnish when faithfully maintained, should be made over to every student who subjects himself to it, and is mentally capable of receiving its benefits. Degrees should neither be rejected or despised because they are improperly worn by many, but we may demand that they shall only be conferred where they are deserved, and upon those who will honor their almæ matres by suitably wearing the degrees they have fairly

and justly received.

The old college curriculum furnishes the preparation which we claim will best fit ambitious youths to enter our medical schools, with the greatest probability of fully appreciating and appropriating the instructions there offered. While through the power of public opinion, it is hoped to secure a recognition of this idea, so that the number of those who shall attempt to enter the profession, except through this doorway, shall be greatly diminished and reduced in the distant future to exceptional instances, we must also depend upon this same public opinion to require that the teachings of those, who have the curriculum itself in charge, shall be full and thorough instead of slight and superficial. The Baccalaureate of Arts must be made to mean exactly what it meant years ago, so that he who wears it may be recognized as entitled, by virtue of the training and special knowledge to which it certifies, to take a place in the professional schools or to pursue his studies in still higher departments of knowledge and research. It is somewhat surprising to find that while academic institutions, duly empowered to confer literary degrees have largely increased in numbers of late years, and are indeed springing up with mushroom like rapidity all over the land, "the proportion of students to population, in spite of the multiplication of colleges, appears gradually to diminish." This fact has recently been adduced for another purpose by Dr. F. A. P. Barnard, the learned President of Columbia College, in an address on "Education and the State," recently delivered before the Regents of the University of the State of New York. Dr. B. says: "Taking the country through, the aggregate number of students, candidates for the degree of Bachelor of Arts, in our colleges, is to the total population of the country nearly in the ratio of one to twenty-five hundred. Less than half a century ago it was not far from one to two thousand. In half a century the population has increased nearly fourfold, the number of colleges three-fold, and the aggregate number of the students in arts in all the colleges put together, but little more than two fold." From this statement we can clearly see that the demand for academic preparation of all professional students should be more urgently pressed than it has been of late years.

Quackery does not only exist in our profession. It frequently finds a place in law and theology, and alas! sometimes dons the instructors' robes in our colleges and other schools. Its existence, however, is always a strong proof that there is a genuine reality of which it is the base counterfeit. This genuine reality we must

seek out, must protect and encourage, must enthrone wherever it is entitled to authority, and must contend for with all the might that in us lies. Quackery in education is probably the worst form it can possibly assume because "just as the twig is bent the tree is inclined," and when the secret springs of truth and knowledge are poisoned at their very source, we can not expect these to vivify and invigorate and benefit the race as their channels widen and their current increases in force and rapidity. The quack-teacher is the greatest possible enemy to healthy, spiritual, mental, or even physical progress. He must be dethroned, and his place filled by genuine merit; but the only power that can perform such a giant task in this country

is the might of positive, pronounced public opinion.

The policy of our government encourages free competition in agriculture, manufactures, and the mechanic arts; it allows rivalry in skill and labor, and discountenances any attempt to fix prices or to impose unnecessary restrictions, upon the ingenuity of man and the rewards that it may claim, by definite legislation. The effect of this policy is to throw the individual, the company, the society, the institution upon its own resources, so that by its own inherent energy and force it may succeed or fail in the work undertaken. This policy doubtless results from a belief that the fittest will survive and flourish. A government wholly paternal is not popular with us, although we advocate the exercise of protection for every citizen in his struggle for life and success, so that he may not be interfered with by his neighbors. The tendency is to the Laizzez-faire system of letting every individual and every enterprise pursue its own natural course without coddling on the part of the government. But this very policy gives the pretender a place in the race for success. By dint of appeals to avarice and the lowest forms of ambition his position, instead of being insignificant, becomes prominent, threatening the displacement of genuine merit from its true sphere. We get veneer instead of reality, glitter instead of intrinsic worth, paste in the place of precious stones, -quackery in labor, mechanics, manufactures and all the industrial arts, and, what is still more, sciolism instead of science, pretense instead of merit in those professions which are entitled to high consideration on account of their close connection with man's spiritual, social and physical needs. And yet this very liberty of action, which thus degenerates to a species of libertinism, carries along with it the remedy for the evils which its abuse creates. If flimsy show and base pretense are allowed a free field, this is not denied to real worth and genuine excellence. They must, however, labor the harder to secure success and to shine by contrast. They must cultivate a taste for the solid and enduring, a desire for that which is real and true, a power of discrimination between the counterfeit and the genuine with a strong tendency to elect the latter under all circumstances. This requires constant attention to the creation of a healthy public opinion, which will insist upon protection of the public from impostors in every human pursuit, and appeal to the honest pride of every man to so fit himself for his calling

that he shall become a master and produce the best possible results.

The story is told of Patrick Lyon—the famous Philadelphia black-smith—that on being asked by a worthy quaker gentleman why he took such pains to polish a screw which would be covered by a plate and thus concealed from sight? his reply was—"Some day this engine will be taken to pieces, and no man must be able to say that Pat. Lyon ever slighted any part of a job." To aid in the creation of a healthy sentiment in reference to the honest performance of every task undertaken, is to aid in the downfall of quackery and in the prevention of inadequately prepared persons from rashly entering upon the prosecution of any occupation or profession. Such a sentiment will swell the number of those who, like the somewhat exceptional Pat. Lyon, are determined never to slight any part of their duty, however trivial or insignificant it may seem to be.

Fellows of the Academy! I congratulate you upon the gradually increasing interest manifested by the profession in the object of our organization. Our list has been swelled at this meeting by the names of some of the best men in the profession,—each one the centre of an influence that must aid in the future attainment of success. What we need is that we shall be true to these, to each other, and our sense of right. A great reformation is needed, but those who combine to aid in it must not suffer themselves to be swerved by any side issues from the main object. Holding this steadily in view, and sinking all selfish considerations, let us earnestly strive, each in his own particular sphere, to secure the ends of our organization,—proudly conscious that in so doing we shall be faithful to our professional obligations, and true to the cause of suffering humanity.



